

10/525674

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<p>Substitute for form 1449A/B/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p>(Use as many sheets as necessary)</p>				<b>Complete If Known</b>	
				Application Number	Not Yet Assigned
				Filing Date	Concurrently Herewith
				First Named Inventor	Burkhard Kröger
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	1	Attorney Docket Number	13111-00002-US

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			

<b>FOREIGN PATENT DOCUMENTS</b>					
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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)			
BA	WO-02/10206		02-07-2002	Degussa AG	
BB	WO-02/18613		03-07-2002	Degussa AG	
BC	WO-2004/024931		03-25-2004	BASF Aktiengesellschaft	
BD	WO-2004/024933		03-25-2004	BASF Aktiengesellschaft	

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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				Filing Date	February 24, 2005
				First Named Inventor	Burkhard Kröger
				Art Unit	1645
				Examiner Name	Not Yet Assigned
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### U.S. PATENT DOCUMENTS

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		Number-Kind Code <sup>2</sup> (# known)			
	AA*	US-2003/0170775-A1	09-11-2003	Pompejus, et al.	
	AB*	US-4,601,893	07-22-1986	Cardinal	
	AC*	US-5,175,108	12-29-1992	Bachmann et al.	
	AD*	US-4,489,160	12-18-1984	Katsumata et al.	
	AE*	US-5,158,891	10-27-1992	Takeda et al.	
	AF*	US-5,965,391	10-12-1999	Reinscheid et al.	
	AG*	US 10/511,302		Kröger et al.	

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>2</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (# known)				
	BA	EP-1108790-A2	06-20-2001	Kyowa Hakko Kogyo Co., Ltd.		
	BB	WO-03/100072-A2	12-04-2003	BASF Aktiengesellschaft		
	BC	WO-2003/087386-A3	10-23-2003	BASF Aktiengesellschaft		See US 10/511,302
	BD	WO-96/15246-A1	05-23-1996	Forschungszentrum Jülich GMBH		See US 5,965,391.
	BE	JP-10-229891-A	09-02-1998	Mitsubishi Rayon Co., Ltd.		See Abstract.
	BF	EP-0472869-A2	03-04-1992	Degussa AG		See US 5,175,108.
	BG	DE-10046870-A1	03-28-2002	BASF Aktiengesellschaft		See US- 2003/0170775 -A1.

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### NON PATENT LITERATURE DOCUMENTS

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	CA	PATEK, M., ET AL., "Leucine Synthesis in <i>Corynebacterium glutamicum</i> : Enzyme Activities, Structure of <i>leuA</i> , and Effect of <i>leuA</i> Inactivation on Lysine Synthesis", Applied and Environmental Microbiology, Vol. 60, No. 1, 1994, pp. 133-140.	
	CB	BOLIVAR, F., "Molecular Cloning Vectors Derived From The CoLE1 Type Plasmid pMB1", Life Sciences, Vol. 25, 1979, pp. 807-818.	
	CC	VIEIRA, J., ET AL., "The pUC plasmids, an M13mp7-derived system for insertion mutagenesis and sequencing with synthetic universal primers", Gene, Vol. 19, 1982, pp. 259-268.	
	CD	MALAKHOVA, I. I., ET AL., "Thin-Layer Chromatography of Free Amino Acids. Selection of Conditions for the Separation of L-Lysine, L-Homoserine, and L-Threonine", Biotechnologiya,	

Examiner Signature	<i>M. Kröger</i>	Date Considered	4/10/06
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				Art Unit	1645
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Sheet	2	of	4	Attorney Docket Number	13111-00002-US

		Vol. 11, 1996, pp. 27-32.
<i>M</i>	CE	SANGER, F., ET AL., "DNA sequencing with chain-terminating inhibitors", Proc. Natl. Acad. Sci. USA, Vol. 74, No. 12, 1977, pp. 5463-5467.
	CF	DUNICAN, L. K., ET AL., "High Frequency Transformation of Whole Cells of Amino Acid Producing Coryneform Bacteria Using High Voltage Electroporation", Biotechnology, Vol. 7, 1989, pp. 1067-1070.
	CG	SIMON, R., ET AL., "A Broad Host Range Mobilization System for <i>In Vivo</i> Genetic Engineering: Transposon Mutagenesis in Gram Negative Bacteria", Biotechnology, Vol. 1, 1983, pp. 784-791.
	CH	SCHRUMPF, B., ET AL., "A Functionally Split Pathway for Lysine Synthesis in <i>Corynebacterium glutamicum</i> ", Journal of Bacteriology, Vol. 173, No. 14, 1991, pp. 4510-4516.
	CI	O'REGAN, M., ET AL., "Cloning and nucleotide sequence of the phosphoenolpyruvate carboxylase-coding gene of <i>Corynebacterium glutamicum</i> ATCC13032", Gene, Vol. 77, 1989, pp. 237-251.
	CJ	GRANT, S. G. N., ET AL., "Differential plasmid rescue from transgenic mouse DNAs into <i>Escherichia coli</i> methylation-restriction mutants", Proc. Natl. Acad. Sci. USA, Vol. 87, 1990, pp. 4645-4649.
	CK	ITAKURA, K., ET AL., "Synthesis and Use of Synthetic Oligonucleotides", Ann. Rev. Biochem., Vol. 53, 1984, pp. 323-356.
	CL	JENSEN, P. R., ET AL., "Artificial Promoters for Metabolic Optimization", Biotechnology and Bioengineering, Vol. 58, 1998, pp. 191-195.
	CM	NARANG, S. A., "Tetrahedron Report Number 140 - DNA Synthesis", Tetrahedron, Vol. 39, No. 1, 1983, pp. 3-22.
	CN	SONNEN, H., ET AL., "Characterization of pGA1, a new plasmid from <i>Corynebacterium glutamicum</i> LP-6", Gene, Vol. 107, 1991, pp. 69-74.
	CO	BERNARD, P., ET AL., "The F Plasmid CcdB Protein Induces Efficient ATP-dependent DNA Cleavage by Gyrase", J. Mol. Biol., Vol. 234, 1993, pp. 534-541.
	CP	SAHM, H., ET AL., "Pathway Analysis and Metabolic Engineering in <i>Corynebacterium glutamicum</i> ", Biol. Chem., Vol. 381, 2000, pp. 899-910.
	CQ	ITAKURA, K., ET AL., "Expression in <i>Escherichia coli</i> of a Chemically Synthesized Gene for the Hormone Somatostatin", Science, Vol. 198, 1977, pp. 1056-1063.
	CR	STADEN, R., "The current status and portability of our sequence handling software", Nucleic Acids Research, Vol. 14, No. 1, 1986, pp. 217-231.
	CS	HOCHULI, E., ET AL., "Genetic Approach to Facilitate Purification of Recombinant Proteins With a Novel Metal Chelate Adsorbent", Biotechnology, Vol. 6, 1988, pp. 1321-1325.
	CT	MAKRIDES, S., "Strategies for Achieving High-Level Expression of Genes in <i>Escherichia coli</i> ", Microbiological Reviews, Vol. 60, No. 3, 1996, pp. 512-538.
	CU	ARKIN, A. P., ET AL., "An algorithm for protein engineering: Simulations of recursive ensemble mutagenesis", Proc. Natl. Acad. Sci. USA, Vol. 89, 1992, pp. 7811-7815.
	CV	EIKMANN, B. J., ET AL., "A family of <i>Corynebacterium glutamicum</i> /Escherichia coli shuttle vectors for cloning, controlled gene expression, and promoter probing", Gene, Vol. 102, 1991, pp. 93-98.
	CW	IKE, Y., ET AL., "Solid phase synthesis of polynucleotides. VIII. Synthesis of mixed oligodeoxyribonucleotides by the phosphotriester solid phase method", Nucleic Acids Research, Vol. 11, No. 2, 1983, pp. 477-488.
	CX	MALUMBRES, M., ET AL., "Codon preference in <i>Corynebacteria</i> ", Gene, Vol. 134, 1993, pp. 15-24.
<i>M</i>	CY	KOHARA, Y., ET AL., "The Physical Map of the Whole <i>E. coli</i> Chromosome: Application of a New Strategy for Rapid Analysis and Sorting of a Large Genomic Library", Cell, Vol. 50, 1987, pp. 495-508.

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				Art Unit	1645
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Sheet	3	of	4	Attorney Docket Number	13111-00002-US

W	CZ	BUTLER, B. A., "Sequence Analysis Using GCG", Methods of Biochemical Analysis, Vol. 39, 1998, pp. 74-97.	
	CA1	TAUCH, A., ET AL., "The Erythromycin Resistance Gene of the <i>Corynebacterium xerosis</i> R-plasmid pTP10 Also Carrying Chloramphenicol, Kanamycin, and Tetracycline Resistances is Capable of Transposition in <i>Corynebacterium glutamicum</i> ", Plasmid, Vol. 33, 1995, pp. 168-179.	
	CB1	LIEBL, W., ET AL., "High efficiency electroporation of intact <i>Corynebacterium glutamicum</i> cells", FEMS Microbiology Letters 65, 1989, pp. 299-304.	
	CC1	LENNOX, E. S., "Transduction of Linked Genetic Characters of the Host by Bacteriophage P1", Virology, Vol. 1, 1955, pp. 190-206.	
	CD1	LIEBL, W., ET AL., "Transfer of <i>Brevibacterium divaricatum</i> DSM 20297 <sup>T</sup> , <i>Brevibacterium flavum</i> DSM 20411, <i>Brevibacterium lactofermentum</i> DSM 20412 and DSM 1412, and <i>Corynebacterium lilium</i> DSM 20137 <sup>T</sup> to <i>Corynebacterium glutamicum</i> and Their Distinction by rRNA Gene Restriction Patterns", International Journal of Systematic Bacteriology, Vol. 41, No. 2, 1991, pp. 255-260.	
	CE1	THIERBACH, G., ET AL., "Transformation of spheroplasts and protoplasts of <i>Corynebacterium glutamicum</i> ", Appl. Microbiol. Biotechnol., Vol. 29, 1988, pp. 356-362.	
	CF1	SERWOLD-DAVIS, T. M., ET AL., "Localization of an origin of replication in <i>Corynebacterium diphtheriae</i> broad host range plasmid pNG2 that also functions in <i>Escherichia coli</i> ", FEMS Microbiology Letters, Vol. 66, 1990, pp. 119-124.	
	CG1	PATEK, M., ET AL., "Promoters from <i>Corynebacterium glutamicum</i> : cloning, molecular analysis and search for a consensus motif", Microbiology, Vol. 142, 1996, pp. 1297-1309.	
	CH1	BEN-BASSAT, A., ET AL., "Processing of the Initiation Methionine from Proteins: Properties of the <i>Escherichia coli</i> Methionine Aminopeptidase and Its Gene Structure", Journal of Bacteriology, Vol. 169, No. 2, 1987, pp. 751-757.	
	CI1	TSUCHIYA, M., ET AL., "Genetic Control Systems of <i>Escherichia coli</i> Can Confer Inducible Expression of Cloned Genes in Coryneform Bacteria", Biotechnology, Vol. 6, 1988, pp. 428-430.	
	CJ1	MARCK, C., "DNA Strider: a 'C' program for the fast analysis of DNA and protein sequences on the Apple Macintosh family of computers", Nucleic Acids Research, Vol. 16, No. 5, 1988, pp. 1829-1836.	
	CK1	GUERRERO, C., ET AL., "Directed mutagenesis of a regulatory palindromic sequence upstream from the <i>Brevibacterium lactofermentum</i> tryptophan operon", Gene, Vol. 138, 1994, pp. 35-41.	
	CL1	WAHL, G. M., ET AL., "Cosmid vectors for rapid genomic walking, restriction mapping, and gene transfer", Proc. Natl. Acad. Sci. USA, Vol. 84, 1987, pp. 2160-2164.	
	CM1	EIKMANNS, B. J., ET AL., "Molecular Aspects of lysine, threonine, and isoleucine biosynthesis in <i>Corynebacterium glutamicum</i> ", Atonie van Leeuwenhoek, Vol. 64, 1993, pp. 145-163.	
	CN1	REINSCHEID, D. J., ET AL., "Stable Expression of <i>hom-1-thrB</i> in <i>Corynebacterium glutamicum</i> and Its Effect on the Carbon Flux to Threonine and Related Amino Acids", Applied and Environmental Microbiology, Vol. 60, No. 1, 1994, pp. 126-132.	
	CO1	MOTOYAMA, H., ET AL., "Overproduction of L-Lysine from Methanol by <i>Methylobacillus glycogenes</i> Derivatives Carrying a Plasmid with a Mutated <i>dapA</i> Gene", Applied and Environmental Microbiology, Vol. 67, No. 7, 2001, pp. 3064-3070.	
	CP1	SAHIN-TOTH, M., ET AL., "Cysteine scanning mutagenesis of the N-terminal 32 amino acid residues in the lactose permease of <i>Escherichia coli</i> ", Protein Sciences, Vol. 3, 1994, pp. 240-247.	
W	CQ1	SCHÄFER, A., ET AL., "Small mobilizable multi-purpose cloning vectors derived from the <i>Escherichia coli</i> plasmids pK18 and pK19: selection of defined deletions in the chromosome of <i>Corynebacterium glutamicum</i> ", Gene, Vol. 145, 1994, pp. 69-73.	

Examiner Signature	<i>W</i>	Date Considered	<i>11/10/07</i>
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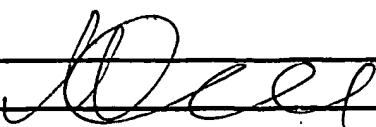
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CR1	SCHWARZER, A., ET AL., "Manipulation of <i>Corynebacterium glutamicum</i> by Gene Disruption and Replacement", <i>Biotechnology</i> , Vol. 9, 1991, pp. 84-87.
CS1	DELAGRAVE, S., ET AL., "Recursive ensemble mutagenesis", <i>Protein Engineering</i> , Vol. 6, No. 3, 1993, pp. 327-331.
CT1	PEARSON, W. R., ET AL., "Improved tools for biological sequence comparison", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 85, 1988, pp. 2444-2448.
CU1	EIKMANNS, B. J., ET AL., "Nucleotide sequence, expression and transcriptional analysis of the <i>Corynebacterium glutamicum</i> <i>gltA</i> gene encoding citrate synthase", <i>Microbiology</i> , Vol. 140, 1994, pp. 1817-1828.
CV1	TAUCH, A., ET AL., " <i>Corynebacterium glutamicum</i> DNA is subjected to methylation-restriction in <i>Escherichia coli</i> ", <i>FEMS Microbiology Letters</i> , Vol. 123, 1994, pp. 343-348.
CW1	LABARRE, J., ET AL., "Gene Replacement, Integration, and Amplification at the <i>gdhA</i> Locus of <i>Corynebacterium glutamicum</i> ", <i>Journal of Bacteriology</i> , Vol. 175, No. 4, 1993, pp. 1001-1007.
CX1	MARTIN, J.F., ET AL., "Cloning Systems in Amino Acid-Producing Corynebacteria", <i>Biotechnology</i> , Vol. 5, 1987, pp. 137-146.
CY1	EIKMANNS, B. J., ET AL., "Identification, Sequence Analysis, and Expression of a <i>Corynebacterium glutamicum</i> Gene Cluster Encoding the Three Glycolytic Enzymes Glyceraldehyde-3-Phosphate Dehydrogenase, 3-Phosphoglycerate Kinase, and Triosephosphate Isomerase", <i>Journal of Bacteriology</i> , Vol. 174, No. 19, 1992, pp. 6076-6086.
CZ1	SCHMIDT, S., ET AL., "Near infrared spectroscopy in fermentation and quality control for amino acid production", <i>Bioprocess Engineering</i> , Vol. 19, 1998, pp. 67-70.
CA2	SPRATT, B., ET AL., "Kanamycin-resistant vectors that are analogues of plasmids pUC8, pUC9, pEMBL8 and pEMBL9", <i>Gene</i> , Vol. 41, 1986, pp. 337-342.
CB2	KASE, H., ET AL., "L-Methionine Production by Methionine Analog-resistant Mutants of <i>Corynebacterium glutamicum</i> ", <i>Agr. Biol. Chem.</i> , Vol. 39, No. 1, 1975, pp. 153-160.
CC2	HWANG, B.-J., ET AL., " <i>Corynebacterium glutamicum</i> Utilizes both Transsulfuration and Direct Sulfhydrylation Pathways for Methionine Biosynthesis", <i>Journal of Bacteriology</i> , Vol. 184, No. 5, 2002, pp. 1277-1286.
CD2	PARK, S.-D., ET AL., "Isolation and Analysis of <i>metA</i> , a Methionine Biosynthetic Gene Encoding Homoserine Acetyltransferase in <i>Corynebacterium glutamicum</i> ", <i>Mol. Cells</i> , Vol. 8, No. 3, 1998, pp. 286-294.

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